CLAIMS

1. A fluid application device comprising:

an application nozzle including a discharge opening directed to face an object that relatively travels with respect to the application device, said application nozzle discharging liquid fluid from the discharge opening and applying the fluid to the object;

a first tank storing the fluid to be applied to the object;

a second tank connected to said first tank;

feeding means for feeding the fluid from said first tank and supplying the fluid toward said second tank;

a supply path for connecting said second tank to said application nozzle and allowing the fluid in said second tank to be supplied to said application nozzle;

pressurizing means for sealing inside of said second tank and applying a prescribed air pressure to the sealed space of said second tank;

fluid level-detecting means for detecting fluid level of the stored fluid in said second tank; and

maintaining means for controlling fluid supply performed by said feeding means based on a detection result of said fluid level-detecting means and maintaining the fluid level at a fixed level.

2. The fluid application device according to claim 1, wherein inside of said first tank is open to the atmosphere.

3. The fluid application device according to claim 1, further comprising:

pressure-detecting means for detecting pressure of the fluid supplied to the application nozzle through said supply path, and

alarm means for giving a prescribed alarm when the

pressure detected by said pressure-detecting means is at a given or higher value.

4. The fluid application device according to claim 3, wherein said pressure-detecting means includes a pressure indicator that indicates a detection value.

5. The fluid application device according to claim 1, wherein said application nozzle is disposed in a rod-forming section of a cigarette manufacturing machine, and seam paste is applied to one of side edge portions of wrapping paper when the wrapping paper travels through the rod-forming section together with garniture tape, the side edge portions of the wrapping paper forming a lap region thereof, the fluid application device further comprising:

a valve needle capable of opening/closing a discharge opening of said application nozzle, and

opening/closing means for opening/closing said valve needle according to operation state of the cigarette manufacturing machine.

6. The fluid application device according to claim 1, wherein said application nozzle includes:

a main body having a tip end directed to face the object;

a discharge opening formed at the tip end of the main body and discharging the fluid to be applied to the object;

a contact surface formed on the tip end of the main body, the contact surface spreading around circumference of the discharge opening and being brought into contact with the object;

a discharge hole extending from the discharge opening toward inside of the main body and guiding flow of the fluid from the inside of the main body;

a corner face formed along the circumference of the discharge opening and chamfering a boundary between an

inner wall of the discharge hole and the contact surface into a curved surface; and

a coating layer formed on a surface of the main body and covering a region from the contact surface including the corner face to the inner wall of the discharge hole.

7. The fluid application device according to claim 6, wherein the coating layer is formed by diamond electrodeposition coating.

8. The fluid application device according to claim 6, wherein the main body has a polished surface on an inner wall of a passage continuing to the discharge hole.

9. A fluid application device comprising:

an application nozzle directed to face an object that relatively travels with respect to said nozzle and being provided with a discharge opening formed at tip end thereof, for discharging fluid to continuously apply the fluid to the object;

a contact surface formed at the tip end of said application nozzle, said contact surface spreading around circumference of the discharge opening and being brought into contact with the object;

a discharge hole formed in a main body of said application nozzle, said discharge hole extending from the discharge opening toward inside of said application nozzle and guiding flow of the fluid from the inside of said application nozzle;

a corner face formed along circumference of the discharge opening and chamfering a boundary between an inner wall of said discharge hole and said contact surface into a curved surface, and

a coating layer formed on a surface of said application nozzle and covering a region from said contact surface including said corner face to the inner wall of

said discharge hole.

10. The fluid application device according to claim 9, wherein said coating layer is formed by diamond electrodeposition coating.

11. The fluid application device according to claim 9, wherein said application nozzle has a polished surface on an inner wall of a passage connected to said discharge hole.